

REMARKS

The specification has been amended to add section headings.

The Examiner has withdrawn claims 4 and 6 from consideration in the present application. Claim 11 has been amended solely as to form.

Claims 1-3, 5, and 7-11 were rejected under 35 U.S.C. 101 as claiming the same invention as that of copending application 10/823,582. The claims in the copending application have been amended so that they are directed to a different invention (for example, the sole independent claim in the copending application defines a lifting surface that includes a flap with a particular clearance between the leading edge of the flap and the trailing edge of the lifting body that is not included in the claims herein.) Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 1, 5, 7-8, and 11 were rejected as unpatentable over DORNIER 2,152,033. Reconsideration and withdrawal of the rejection are respectfully requested.

Claim 1 provides, among other features, that the axis of rotation of the flap is situated at a first distance from the leading edge, which is included between 15% and 35% of the chord of the flap. DORNIER does not explicitly disclose this feature in the text and the sole drawing shows that the corresponding first distance is about 10% of the chord of the flap. There is

no suggestion in the reference that the first distance is a result effective variable that may be optimized to provide a particular result. Indeed, there is no suggestion to vary this distance at all in the references. DORNIER states (first page, left column, lines 25-27) that "it is essential that the center of gravity of the rudder coincides with the axis of rotation of the rudder." Accordingly, one of skill in the art would not be motivated to change the first distance in DORNIER to the range in claim 1 herein.

Further, the text of DORNIER does not mention the shape of the flap or the main angle of the trailing edge. While the sole drawing may coincidentally depict the concave shape and main angle between 10° and 30° , one of skill in the art will recognize that the drawing is merely a schematic (the text does not imply that it is any more than this) that should not be relied upon for a "teaching" about the shape of the flap or its trailing edge. Accordingly, there is nothing in the reference that would motivate one of skill in the art to make a flap with the concave shape and trailing edge as claimed herein.

Further, the combination of these features produces an unexpected result; namely a greatly reduced hinge moment as explained at pages 2-3 of specification. There is nothing in the references that would lead one of skill in the art to expect that the hinge moment would be reduced by combining these features in the manner claimed. An unexpected result provides patentability

even to optimized variables that are known to be result effective
In re Antonie 195 USPQ 6 (CCPA 1977).

The dependent claims provide further features that, in combination with the features of claim 1, are patentable for the reasons set forth above.

Claims 2-3 were rejected as unpatentable over DORNIER in view of GREEN 5,374,162 and claims 9-10 were rejected as unpatentable over DORNIER in view CARTER, JR. et al. 2002/0005458. Reconsideration and withdrawal of the rejections are respectfully requested for the reason set forth above.

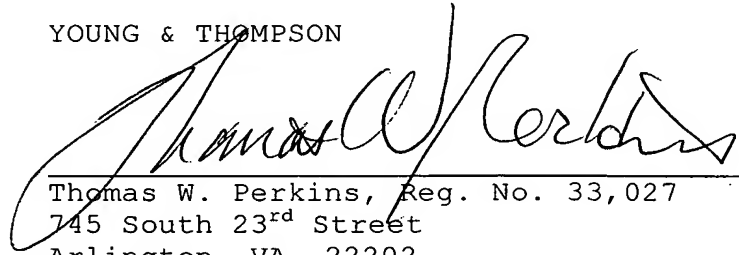
Further, GREEN does not describe a leading edge that is elliptical where the first major axis to minor axis quotient is less than or equal to 1.5 (the leading edge in GREEN is not elliptical and if it were it would have a quotient of about 2). Indeed, GREEN is not directed to a flap at all; it is directed to a coolable leading edge of a rotor blade that offers no motivation to use this shape in a flap (which, as known, is not a leading edge of a lifting body). CARTER, JR. et al. does not describe the particular quotients of claims 9 and 10 and thus these features would not be obvious to one of skill in the art from the proposed combination.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

A large, stylized handwritten signature in black ink, appearing to read 'Thomas W. Perkins', is written over a horizontal line.

Thomas W. Perkins, Reg. No. 33,027
745 South 23rd Street
Arlington, VA 22202
Telephone (703) 521-2297
Telefax (703) 685-0573
(703) 979-4709

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